



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/784,700	02/23/2004	Tsuneki Takahashi	1990.69815	1323

7590 10/15/2007
Patrick G. Burns, Esq.
GREER, BURNS & CRAIN, LTD.
Suite 2500
300 South Wacker Dr.
Chicago, IL 60606

EXAMINER

OKORONKWO, CHINWENDU C

ART UNIT	PAPER NUMBER
----------	--------------

2136

MAIL DATE	DELIVERY MODE
-----------	---------------

10/15/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/784,700

Applicant(s)

TAKAHASHI, TSUNEKI

Examiner

Chinwendu C. Okoronkwo

Art Unit

2136

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2136

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(e). The certified copy has been filed in parent Application No. 2003-136867, filed on 05/15/2003.

Information Disclosure Statement

2. For the record, the Examiner acknowledges that no IDS has yet to have been received with this application filed on 02/23/2004.

Oath/Declaration

3. For the record, the Examiner acknowledges that the Oath/Declaration submitted on 02/23/2004 has been received and considered.

Drawings

4. For the record, the Examiner acknowledges that the Drawings submitted on 02/23/2004 have been received and considered.

Specification

5. For the record, the Examiner acknowledges that the Specification submitted on 02/23/2004 has been received and considered.

6. Pursuant to USC 131, claims 1-15 are presented for examination.
7. Claims 1-15 are pending.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sako et al. (US Patent Application Publication No. 2004013183 A1).

Regarding claim 1, Sako et al., provides an obvious type disclosure of a magnetic disk apparatus comprising:

a cipher key memory unit which stores a cipher key used for encoding and decoding data (0007-0011);

a cipher encode unit which encodes data input via an interface from an upper apparatus using the cipher key, the cipher encode unit recording the encoded data onto a record medium (0007-0011);

a cipher decode unit which decodes the encoded data read out from the record medium using the cipher key, the cipher decode unit outputting the decoded data via the interface to the upper apparatus (0007-0011); and a cipher key change unit which changes a cipher key stored in the cipher key memory unit (0007-0011).

Although Sako et al. does not explicitly disclose both the cipher keys used for encryption and decryption, it would have been obvious to modify the disclosed watermark signals into cipher keys used for encryption. Sako et al. provides motivation for this disclosure in the recitation, "The present invention provides a data recording device comprising a deciphering processing unit for deciphering and/or decompressing input encrypted and/or compressed data by way of deciphering processing, a detection unit for detecting whether or not watermark signals are included in output data of the deciphering processing, a data processing unit supplied at least with data from the deciphering processing for applying signal processing for recording to the supplied data, a recording unit for recording output data from the processing unit on a recording medium, and a controller for controlling the operation of the data processing unit when the detection unit detects that the watermark signals are included, based on the so detected watermark signals (0010)."

Regarding claim 2, Sako et al., discloses the magnetic disk apparatus according to claim 1, wherein the cipher key memory unit stores a predefined cipher key written in at a stage of manufacturing the apparatus (0021-0024).

Regarding claim 3, Sako et al., discloses the magnetic disk apparatus according to claim 1, wherein the cipher key memory unit is a nonvolatile memory (0034).

Although Sako et al. does not explicitly disclose "nonvolatile memory," it would have been obvious to modify the disclosed recording medium memory – recording medium meaning a hard disc, an optical disc of the overwrite or write once type, a magneto-optical disc, magnetic disc, magnetic tape or IC card – into the "nonvolatile memory." In fact Examiner submits that the disclosed memory types are by definition nonvolatile memory. Sako et al. provides motivation for this disclosure in the recitation, "When the second switching circuit 28 is off and the first switching circuit 27 is on, the encryption circuit 15 is supplied with compressed contents data deciphered by the deciphering circuit 12. The encryption circuit 15 encrypts compressed data, supplied thereto with cipher key data distinct from the cipher key data of the contents data supplied to e.g. the input terminal 11. The cipher key data is e.g. data based on a serial number etc. of the recording medium 16 on which to record the contents data. The encryption circuit 15 uses cipher key data

distinct from the cipher key data used for the contents data supplied to the input terminal 11, or uses a distinct cipher system, to improve the safety of the contents data. The encryption circuit 15 outputs the encrypted contents data via second selector 22 to the recording processing circuit 19 (0028)."

Regarding claim 4, Sako et al., discloses the magnetic disk apparatus according to claim 1, wherein the cipher key memory unit is a medium area other than a user recording area of the record medium (0034).

Regarding claim 5, Sako et al., discloses the magnetic disk apparatus according to claim 1, wherein the cipher key change unit changes the cipher key stored in the cipher key memory unit when all the record data residing in a user recording area on the record medium is discarded collectively (0028).

Regarding claim 6, Sako et al., discloses the magnetic disk apparatus according to claim 1, wherein the cipher key change unit changes the cipher key in the cipher key memory unit in response to a special command other than a command system for the upper apparatus (0028).

Regarding claim 7, Sako et al., discloses the magnetic disk apparatus according to claim 1, wherein the cipher key change unit changes the cipher key in the

cipher key memory unit in response to a special command from a cipher key change application installed in the upper apparatus (0050-0052).

Regarding claim 8, Sako et al., discloses the magnetic disk apparatus according to claim 1, wherein the cipher key change unit changes the cipher key in the cipher key memory unit in response to a special command from a cipher key change application installed by the upper apparatus via network (0050-0052).

Regarding claim 9, Sako et al., discloses the magnetic disk apparatus according to claim 1, wherein the cipher key change unit changes the cipher key in the cipher key memory unit by recognizing a physical event manipulation in the apparatus (0050-0052).

Regarding claim 10, Sako et al., discloses the magnetic disk apparatus according to claim 1, wherein the cipher key change unit changes the cipher key by generating a new cipher key through a process of, e.g., shuffling of the cipher key stored in the cipher key memory unit (0050-0052).

Regarding claim 11, Sako et al., discloses the magnetic disk apparatus according to claim 1, wherein the cipher key change unit changes a cipher key stored in the cipher key memory unit, into another cipher key added to a cipher key change command from the upper apparatus (0050-0052).

Regarding claim 12, Sako et al., discloses a cipher processing method for a magnetic disk apparatus, comprising: a cipher key memory step of storing in a memory unit a cipher key used for encoding and decoding data; an encoding/recording step of converting data input via an interface from an upper apparatus into encoded data using the cipher key, and storing the encoded data onto a record medium; a decoding/readout step of decoding the encoded data read out from the record medium using the cipher key, and outputting the decoded data via the interface to the upper apparatus; and a cipher key change step of changing a cipher key stored in the cipher key memory unit (Rejected under the same rationale as claim 1).

Regarding claim 13, Sako et al., discloses the cipher processing method for a magnetic disk apparatus according to claim 12, wherein the cipher key change step includes changing the cipher key stored in the cipher key memory unit when all the record data residing in a user recording area on the record medium is discarded collectively (Rejected under the same rationale as claim 2).

Regarding claim 14, Sako et al., discloses a program operable to cause a computer incorporated in a magnetic disk apparatus to execute: a cipher key memory step of storing in a memory unit a cipher key used for encoding and decoding data; an encoding/recording step of converting data input via an

interface from an upper apparatus into encoded data using the cipher key, and storing the encoded data onto a record medium; a decoding/readout step of decoding the encoded data read out from the record medium using the cipher key, and outputting the decoded data via the interface to the upper apparatus; and a cipher key change step of changing a cipher key stored in the cipher key memory unit (Rejected under the same rationale as claims 3 and 4).

Regarding claim 15, Sako et al., discloses the program according to claim 14, wherein the cipher key change step includes changing the cipher key stored in the cipher key memory unit when all the record data residing in a user recording area on the record medium is discarded collectively (Rejected under the same rationale as claims 5-10).

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chinwendu C. Okoronkwo whose telephone number is (571) 272 2662. The examiner can normally be reached on MWF 9:30 - 7:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nasser Moazzami can be reached on (571) 272 4195. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2136

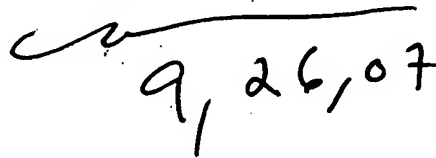
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



CCO

September 24, 2007

NASSER MOAZZAMI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100



9,26,07